STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION – DIVISION OF WATER QUALITY
AUGUST 18, 2020

ITEM 3

SUBJECT

SEWERSHED SURVEILLANCE FOR COVID-19

DISCUSSION

Researchers around the world are investigating the potential to monitor for SARS-CoV-2, the virus that causes COVID-19, in the sewershed (e.g., wastewater and sludge) to inform COVID-19 epidemiology and response actions. Sewershed surveillance has been used before to investigate the epidemiology of other pathogens such as the polio virus. Currently, researchers around the world are identifying and addressing research needs to improve methods for sewershed surveillance for COVID-19 to respond to the current COVID-19 pandemic and plan for future outbreaks. This includes developing methods to accurately and reliably monitor for SARS-CoV-2 in complex matrixes like wastewater, linking concentrations of SARS-CoV-2 in wastewater and settled solids to prevalence of COVID-19 cases in the population. This effort will aid in establishing trends or changes in rates of infection, identifying hotspots and tracking impacts of medical and social interventions, and making decisions on when to implement or release social interventions, as well as conducting risk assessments. While the state of the science is rapidly progressing, a number of data gaps still need be addressed before some of these objectives can be achieved.

In April 2020, the Water Research Foundation hosted a Virtual International Water Research Summit on Environmental Surveillance of COVID-19 Indicators in Sewersheds that brought together researchers, utilities, and industry experts to share their expertise, discuss best practices, and identify research needs. The Water Research Foundation has initiated a suite of research projects to address these critical research needs to improve the efficacy of sewershed surveillance to inform COVID-19 epidemiology and decision-making.

The State Water Board is collaborating with academic and industry scientists and experts, including the Water Research Foundation on projects to: develop a model that links concentrations of SARS-CoV-2 in wastewater influent and settled solids to prevalence of infection in the population; and develop reliable, repeatable analytical methods to quantify pathogens in raw wastewater, including SARS-CoV-2. Data from these studies are not yet available but will be emerging over the next months to year.

As data continues to emerge and the state of the science progresses, in order to successfully utilize sewershed surveillance for COVID-19, we must utilize a collaborative approach to connect wastewater utilities, researchers, laboratories, public health officials, state and federal agencies (e.g., State Water Board, California Department of Public Health, Center for Disease Control, U.S. EPA), and other government decisions makers in order to make informed decisions based on sound science.

POLICY ISSUE

None.

FISCAL IMPACT

None.

REGIONAL BOARD IMPACT

None.

STAFF RECOMMENDATION

No action needed - informational item.